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ART 34 A-MDT

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WHAT I/WE CLAIM IS:

1. An improved toilet and flushing system, wherein the system includes;

- a toilet bowl; and
- a pressured water supply;
- at least one flow regulator;
- at least one water outlet;

characterized in that the system includes: at least one control device configured to operate said flow regulator(s) to control the flow of the pressured water supply, and wherein the outlet(s) are configured to deliver water from the pressured water supply, so that water from the pressured water supply:

- a) creates a venturi effect to evacuate waste and water from the bowl; and
- b) travels along wall(s) of the toilet bowl to wash and refill the toilet.

2. An improved toilet and flushing system as claimed in claim 1, wherein the toilet bowl is adapted so that water from the water supply can enter the bowl, via at least two top outlets and at least one bottom outlet.

3. An improved toilet and flushing system as claimed in claim 2 wherein the control device is operably connected to the flow regulator, such that when the control device is activated to flush the toilet, the control device is configured to operate the flow regulator so that:

- a) water from water supply can enter the bowl from the bottom outlet for a predetermined period of time; and
- b) water from water supply can then enter the bowl from the two top outlets for a predetermined period of time; and then

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- c) the water supply to the bowl is shut off, until the control device is reactivated to flush the toilet:

wherein said bottom outlet is configured to create a venturi effect capable of evacuating waste and water from the bowl, and wherein said top outlets are positioned about the top of the bowl and are configured to direct water on to the wall of the bowl, so that water can travel along the wall(s) of the bowl to wash and refill the toilet.

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4. An improved toilet and flushing system, as claimed in claim 1 wherein the mains water supply has a water pressure of at least 30 PSI

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5. An improved toilet and flushing system, as claimed in claim 3, wherein the system utilizes two flow regulators, a first flow regulator to control the flow of water to the bottom outlet, and a second flow regulator to control the flow of water to the top outlets.

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6. An improved toilet and flushing system, as claimed in claim 5 wherein the top outlets are positioned about the top of the bowl, such that water exiting the outlets, travels around and down the walls of the bowl, in a substantially clockwise or anti-clockwise direction.

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7. An improved toilet and flushing system, as claimed in claim 6 wherein the top outlets are configured to allow for water to be directed onto the top of the wall(s) of the toilet.

8. An improved toilet and flushing system as claimed in claim 2, wherein the venturi effect may be created by:

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- a) water exiting the bottom outlet through a tapered end portion which increases the velocity of the water; and
b) the water exiting the bottom outlet such that it is directed towards the back of the bowl at a point approximately 5 centimeters above the outlet;

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such that water and waste are sucked out of the bowl to leave the bowl empty.

9. An improved toilet and flushing system as claimed in claim 1 wherein the flow regulator comprises an on/off valve.
- 5 10. An improved toilet and flushing system as claimed in claim 1 wherein the flow regulator is a solenoid valve having an inlet and two outlets wherein the valve is configured to be capable of:
 - a) directing water to either first outlet or second outlet from said valve; and
 - b) shutting off the water supply to both outlets.
- 10 11. An improved flushing system as claimed in claim 1 wherein there are provided two flow regulators in the form of solenoid valves each having an inlet and an outlet.
12. An improved toilet and flushing system as claimed in claim 1 wherein a control device may be an electronic timing device capable of being configured to operate at least one solenoid valve in a desired manner over a predetermined time period.
- 15 13. A method for flushing a toilet comprising the steps of:
 - a) controlling the flow of a pressured water supply to a toilet bowl;
 - b) delivering the pressured water supply to the toilet bowl so that water from the pressured water supply:
 - 1) creates a venturi effect to evacuate waste and water from the bowl; and
 - 20 ii) travels along wall(s) of the toilet bowl to wash and refill the toilet.
14. A method for flushing a toilet comprising the steps of:
 - a) providing water to at least one bottom outlet, for a predetermined period of time, wherein said outlet is positioned in the base of a toilet bowl and

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configured to achieve a venturi effect, capable of evacuating water and waste from the bowl; and then

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- b) providing water to at least two top outlets for a predetermined period of time wherein said outlets are positioned at the top of the toilet bowl and are configured so that water is directed onto the walls of the toilet bowl; and then
 - c) stopping the flow of water to the top outlets to complete the flush cycle once the bowl has been filled to the desired level.

15. A method of manufacturing a toilet comprising the steps of:

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- a) providing at least one water outlet in the base of a toilet bowl wherein said outlet is configured to achieve a venturi effect when operated;
 - b) providing at least two water outlets about the top of a toilet bowl configured to direct water on to the wall(s) of the bowl.

16. A kit for a toilet and flushing system which includes:

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- a) at least one water outlet in the base of a toilet bowl wherein said outlet is configured to achieve a venturi effect when operated;
 - b) at least two water outlets about the top of a toilet bowl configured to direct water on to the wall(s) of the bowl;
 - c) at least one flow regulator to regulate the flow of water from the water supply to said outlets;
 - d) at least one control device to activate and deactivate at least one flow regulator.
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17. An improved toilet and flushing system wherein the system is characterized in that the toilet bowl is adapted so that water from the water supply can enter the bowl, via at least two top outlets and at least one bottom outlet, wherein the

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system also includes at least one control device operably connected at least one flow regulator, to regulate the flow of water from the water supply to the bowl, such that when the control device is activated to flush the toilet, the control device is configured to operate the flow regulator so that:

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- a) water from water supply can enter the bowl from the bottom outlet for a predetermined period of time; and
 - b) water from water supply can then enter the bowl from the two top outlets for a predetermined period of time; and then
 - c) the water supply to the bowl is shut off, until the control device is reactivated
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- to flush the toilet:

wherein said bottom outlet is configured to create a venturi effect capable of evacuating waste and water from the bowl, and wherein said top outlets are positioned about the top of the bowl and are configured to direct water on to the wall(s) of the bowl, so that water can travel along wall(s) of bowl to wash and

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refill the toilet.

18. An improved toilet and flushing system, wherein the system includes:

- a toilet bowl; and
- a water supply;

the system characterized in that the toilet bowl is adapted so that water from the water supply can enter the bowl, via at least two top outlets and at least one bottom outlet, wherein the system also includes at least one control device, operably connected to at least one flow regulator to regulate the flow of water from the water supply to the bowl, such that when the control device is activated, to flush the toilet, the control device is configured to operate the flow regulator

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so that:

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- a) water from water supply enters the bowl from the two top outlets for a predetermined period of time; and
- b) water from water supply then enters the bowl from the bottom outlet for a predetermined period of time; and
- 5 c) water from the water supply then re-enters the bowl from the two top outlets for a further predetermined period of time; and then
- d) the water supply to the bowl is shut off until the control device is reactivated to flush the toilet;

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wherein said bottom outlet is configured to create a venturi effect capable of evacuating waste and water from the bowl, and wherein said top outlets are positioned about the top of the bowl and are configured to direct water on to the wall(s) of the bowl, so that water thereon can travel along the wall(s) of bowl when the toilet is filled.

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